AMENDMENT TO THE CLAIMS

1. (Original) A method for fabricating a semiconductor, comprising the steps of:

(1) growing a first semiconductor layer made of $Al_xGa_{1-x}N$ ($0 \leq x \leq 1$) on a substrate at a temperature higher than room temperature; and

(2) growing a second semiconductor layer made of $Al_uGa_vIn_wN$ ($0 < u \leq 1$, $0 \leq v \leq 1$, $0 \leq w \leq 1$, $u+v+w=1$) over the first semiconductor layer,

wherein in the step (1), the mole fraction x of Al of the first semiconductor layer is set so that the lattice constant of the first semiconductor layer at room temperature substantially matches with the lattice constant of the second semiconductor layer in the bulk state after thermal shrinkage or thermal expansion.

2. (Original) The method of Claim 1, further comprising the step of growing a third semiconductor layer having an Al mole fraction smaller than the second semiconductor layer between the first semiconductor layer and the second semiconductor layer or over the second semiconductor layer.

3. (Original) The method of Claim 1, wherein the substrate is composed of sapphire, silicon carbide, or silicon.

4. (Original) A method for fabricating a semiconductor, comprising the step of:

growing a semiconductor layer made of $Al_uGa_vIn_wN$ ($0 < u \leq 1$, $0 \leq v \leq 1$, $0 \leq w \leq 1$, $u+v+w=1$) over a semiconductor substrate made of $Al_xGa_{1-x}N$ ($0 \leq x \leq 1$),

wherein the lattice constant of the semiconductor substrate is made to substantially match with the lattice constant of the semiconductor layer in the bulk state.

5. (Original) A method for fabricating a semiconductor, comprising the step of:

growing a semiconductor layer made of $Al_uGa_vIn_wN$ ($0<u\leq1$, $0\leq v\leq1$, $0\leq w\leq1$, $u+v+w=1$) over a semiconductor substrate made of $Al_xGa_{1-x}N$ ($0\leq x\leq1$).

6. (Original) The method of Claim 5, wherein the semiconductor substrate contains indium.

7. (Original) A method for fabricating a semiconductor substrate, comprising the step of forming a semiconductor substrate from $Al_xGa_{1-x}N$ ($0\leq x\leq1$) to be used as a substrate over which a semiconductor layer made of $Al_uGa_vIn_wN$ ($0<u\leq1$, $0\leq v\leq1$, $0\leq w\leq1$, $u+v+w=1$) is grown,

wherein the mole fraction x of Al of the semiconductor substrate is set so that the lattice constant of the semiconductor substrate substantially matches with the lattice constant of the semiconductor layer in the bulk state.

8. (Withdrawn) A semiconductor light emitting device, comprising:

a first semiconductor layer made of $Al_xGa_{1-x}N$ ($0\leq x\leq1$) formed on a substrate; and

a second semiconductor layer made of $Al_uGa_vIn_wN$ ($0<u\leq1$, $0\leq v\leq1$, $0\leq w\leq1$, $u+v+w=1$) formed over the first semiconductor layer,

wherein the lattice constant of the first semiconductor layer at room temperature substantially matches with the lattice constant of the second semiconductor layer in the bulk state after thermal shrinkage or thermal expansion.

9. (Withdrawn) The semiconductor light emitting device of Claim 8, further comprising an active layer having an Al mole fraction smaller than the second semiconductor layer between the first semiconductor layer and the second semiconductor layer or over the second semiconductor layer,

wherein the second semiconductor layer is a cladding layer.

10. (Withdrawn) The semiconductor light emitting device of Claim 8, wherein the substrate is composed of sapphire, silicon carbide, or silicon.

11. (Withdrawn) A semiconductor light emitting device, comprising:

a semiconductor substrate made of $Al_xGa_{1-x}N$ ($0 \leq x \leq 1$); and

a semiconductor layer made of $Al_uGa_vIn_wN$ ($0 < u \leq 1$, $0 \leq v \leq 1$, $0 \leq w \leq 1$, $u+v+w=1$) formed over the semiconductor substrate,

wherein the lattice constant of the semiconductor substrate substantially matches with the lattice constant of the semiconductor layer in the bulk state.

12. (Withdrawn) A semiconductor light emitting device, comprising:

a semiconductor substrate made of $Al_xGa_{1-x}N$ ($0 \leq x \leq 1$); and

a semiconductor layer made of $Al_uGa_vIn_wN$ ($0 < u \leq 1$, $0 \leq v \leq 1$, $0 \leq w \leq 1$, $u+v+w=1$) formed over the semiconductor substrate.

13. (Withdrawn) The semiconductor light emitting device of Claim 12, wherein the semiconductor substrate contains indium.

14. (Currently amended) The method of claim 1, wherein the first semiconductor layer is formed by supplying a material gas heated to a temperature of around 1020°C.

15. (Currently amended) The method of claim 4, wherein the semiconductor layer is formed by supplying a material gas heated to a temperature of around 1020°C.

16. (Currently amended) The method of claim 5, wherein the semiconductor layer is formed by supplying a material gas heated to a temperature of around 1020°C.

17. (Currently amended) The method of claim 7, wherein the semiconductor layer is formed by supplying a material gas heated to a temperature of around 1020°C.